

ELECTION AND REMARKS

Status of the Claims

Claims 1-41 remain pending in the application. In this response, no amendment has been made to the specification or to the claims of the present application.

Restriction

The Examiner has concluded that the above-identified application includes claims that are directed to more than one species. He indicates that these species lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1. In addition, he indicates that there are five groups of patentably distinct species defined by the claims in this application. He indicates that Species 1 is directed to Figure 3, Species 2 is directed to Figure 4, Species 3 is directed to Figure 5, Species 4 is directed to Figure 6, and Species 5 is directed to Figure 7. The Examiner has indicated that we must elect a single disclosed species for prosecution on the merits to which the claims shall be restricted, if no generic claim is finally held to be allowable. He has concluded that no claim is considered as generic.

Election

Applicants hereby affirmatively elect Species 5 (FIGURE 7). It is applicants' position that Claims 1-38 all read on the elected species.

This election is made with traverse, respectfully, for the reasons discussed below.

Traversal

Applicants respectfully submit that Species 1-5 of FIGURES 3-7 are linked as to form a *single general inventive concept* in the *generic* independent Claims 1 and 20, respectively. Each of these species includes the special technical feature of providing the ability to determine an accommodation for an eye of the viewer as recited in step (b) of Claim 1 and subparagraph (d)(ii) of Claim 20.

Therefore, regardless of which specific exemplary configuration of FIGURES 3-7 is used for determining the accommodation, the contribution that each species, considered as a whole with the other steps of Claim 1 or other subparagraphs of Claim 20, makes over the prior art for the single invention recited in independent Claims 1 and 20, is to enable depth to be more accurately conveyed in a displayed image.

1 Before discussing why applicants perceive that Species 1-5 (FIGURES 3-7) are linked as to
2 form a *single general inventive concept*, it may be helpful to first discuss why applicants perceive that
3 independent Claims 1 and 20 are generic to all of the species. In describing why applicants perceive
4 that Claim 1 is generic to Species 1-5, it may be helpful to illustrate an example of the recitation in
5 Claim 1 with respect to each step, utilizing FIGURE 7, the elected Species E.

6 Referring to elements shown in FIGURE 7, an example of these elements plugged into the
7 recitation of step (a) would be:

8 displaying an image (i.e. a tree and house and driveway) to a viewer (i.e. left eye 60
9 and right eye 62 of a viewer) on a large depth of focus display (i.e. large DOF
10 display 54).

11 The disclosure also states that:

12 ***Accommodation:*** Like most cameras, the human eye has a limited DOF. When
13 viewing a real scene, not every object in the scene is in focus at any given time.
14 Instead, the viewer *accommodates* (adjusts the focus of the eye) to bring objects at
15 various distances into focus. For instance, if the viewer accommodates to an object
16 that is one meter away, the retinal image of an object that is 20 meters away is blurry.
17 The farther away an object is from the focus point of the viewer, the blurrier the retinal
18 image of that object is. (Specification, page 2, lines 4-10.)

19 As highlighted in the underlined portion above, the term “accommodates” is used to define
20 how the viewer adjusts the focus of the eye. An example of these elements plugged into the
21 recitation of step (b) would be:

22 determining an accommodation (i.e. focus adjustment) for an eye of the viewer (i.e.
23 left eye 60 and right eye 62) who is watching the image (i.e. a tree and house and
24 driveway) on the large depth of focus display (i.e. large DOF display 54).

25 It may also be helpful to look at the steps recited in FIGURE 8, that is a flow chart showing
26 the logic employed in the present invention to select and display an image with an apparent focus
27 plane that corresponds to a viewer’s level of accommodation. The steps of this flow chart are
28 described on line 11, page 15 through line 6, page 16. More specifically, notice that step 80 explains
29 that when a person views the display, the person’s eyes accommodate and converge on an element in
30 the large DOF display. The accommodation of the viewer’s eye(s) is measured in a step 82.
Alternatively, the system measures the vergence (or gaze direction) of the viewer’s eyes in a step 82’
(and can then optionally compute the accommodation power based on the vergence) (specification,

1 page 15, lines 11-14). In a step 98, a new image with a best focus plane that corresponds to a
2 viewer's level of accommodation is shown. An example of these steps plugged into the recitation of
3 step (c) would be:

4 displaying an image having an apparent focus plane that tracks the accommodation of
5 the viewer (i.e., step 98 (new image with a best focus plane)), so that as the
6 accommodation of the viewer watching the large depth of focus display changes (i.e.
7 step 80 (a person views a display and accommodates & converges)), the image that is
8 displayed (i.e., a tree and house and driveway in the illustrated example) is changed to
9 more accurately convey depth in the image that is displayed.

10 The disclosure also explains "concurrent with the viewing of the large DOF display, the
11 accommodation of the viewer must be monitored, to implement the present invention" (specification,
12 page 11, lines 7-8). One way this can be achieved is through the use of an IR optometer such as the
13 SureSight™ autorefractor (specification, page 11, line 18). More specifically:

14 The SureSight™ autorefractor is most accurate when its IR beam can enter into the
15 eye along the eye's visual axis. A number of alternate configurations allow this to
16 occur, and a subset of these configurations is illustrated in the embodiments of the
17 present invention shown in FIGURES 3-7. In each of these Figures, a general layout
18 of components is shown for a binocular display. These Figures are also helpful in
19 visualizing the layouts for monocular displays by referring only to the right side of
20 each Figure. (Specification, page 11, line 29-page 12, line 1.)

21 Thus, it is apparent that FIGURES 3-7 all illustrate alternative configurations for measuring
22 the accommodation of the viewer, such that steps (b) and (c) can be carried out in the method for
23 more accurately conveying depth in an image, as recited in the preamble of Claim 1. Claim 20 also
24 includes subparagraphs (d)(i)-(d)(iii) that are generally similar to steps (a)-(c) of Claim 1. Therefore,
25 applicants also respectfully submit that Claim 20 is generic to all of Species 1-5 (FIGURES 3-7).

26 Applicants note that as explained above, one of the technical features that is common to all of
27 the alternate configurations of Species 1-5 (FIGURES 3-7) is their ability to monitor (or determine)
28 the viewer's accommodation. This capability of each different species identified by the Examiner
29 relates to only one part of the overall claimed invention (as recited in step (b) of Claim 1 and
30 subparagraph (d)(ii) of Claim 20)– the species do not represent different embodiments of the overall
claimed invention. The ability to monitor the viewer's accommodation as it changes as the viewer
watches a large depth of focus display, makes a contribution toward enabling the image to be

1 displayed so as to more accurately convey depth, which is one key aspect of the novelty and of the
2 inventive steps of Claims 1 and 20.

3 Clearly, the Examiner will NOT be unduly burdened by searching for prior art relevant to the
4 claims for these different species, since to search for prior art relevant to the independent claims, the
5 Examiner will still need to search the same Classes and subclasses. Accordingly, applicants submit
6 that there is no justification for this restriction. And, they respectfully request that the Examiner
7 withdraw the Restriction and examine all claims in the application because Claims 1 and 20 are
8 generic to all species and all the species are linked by a single general inventive concept.

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10 Respectfully submitted,

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